

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1 - 18 are pending in this application. Claims 1, 10, and 18 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 10.

Objection

The drawings have been amended in this reply in view of the Examiner's objection and are in accordance with the Examiner's suggestion on page 2 of the Office Action. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

Rejection(s) under 35 U.S.C § 103

Claim 1 stands rejected under 35 U.S.C. § 103 as obvious over The LDUP Replication Update Protocol ("Stokes") and U.S. Patent No. 5,835,757 ("Oulid-Aissa"). Claim 1 has been amended by adding the limitation recited in claim 2 to clarify the present invention recited, thus this rejection is now moot.

Claim 2 stands rejected as obvious over Stokes, Oulid-Aissa, and further in view of U.S. Patent No. 5,805,822 ("Long"). Claim 2 has been cancelled. However, claim 1 has been amended to incorporate the limitations of claim 2. Therefore, to the extent that

this rejection applies to the amended claim 1, the rejection is respectfully traversed.

The present invention as amended relates to a directory system of supplier servers and consumer servers. Operations may be performed at any consumer server; however, the updates need to be reflected at each server. The replication of the updated data from one server to another is managed using a change sequence number. Specifically, the claimed change sequence number is a tuple. A tuple is an ordered set which may be used as an actual data type. Further, the change sequence number is an ordered set containing a timestamp portion, a sequence number portion, a replica identifier portion, and a sub-sequence number portion. The timestamp portion and the sequence number portion are used to guarantee that the generated change sequence number is always greater than any other change sequence number. Further, the replica identifier portion is the replica ID of the server where the change sequence number was generated. Lastly, the sub-sequence number is used to order operations within a single Lightweight Directory Access Protocol (LDAP) operation (*e.g.*, add, delete, modify, etc.).

In contrast, Stokes, Oulid-Aissa, and Long do not teach the use of a tuple for the change sequence number. Further, neither Oulid-Aissa nor Long teaches the use of a change sequence number. In addition, where Stokes teaches the use of a change sequence number, the change sequence number is not in the form of a tuple. Specifically, the Examiner asserts that page 6 section 5.1 of Stokes and page 9 section 5.3.2.2 of Stokes teach a tuple that forms the change sequence number.

Further, none of Stokes, Oulid-Aissa, or Long teaches each of the components of the tuple as claimed in the present invention. The Examiner asserts that teaches the use of a sub-sequence number at column 6, lines 38-42. However, the sub-sequence number

taught in Long differs from the claimed invention because the sub-sequence number is used during a failure of data transmission. The sub-sequence number taught in Long is only used to label a segment when it must be sub-segmented into smaller blocks.

In view of the above, Stokes, Oulid-Aissa, and Long, whether considered separately or together, fail to show or suggest the present invention as recited in claim 1 as amended. Thus, claim 1 as amended is patentable over Stokes, Oulid-Aissa, and Long. Dependent claims 3-9, which depend directly or indirectly from claim 1, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 10 and 18 stand rejected under 35 U.S.C. § 103 as obvious over Stokes, Oulid-Aissa, and Long. This rejection is respectfully traversed. These claims contain similar subject material as claim 1 discussed above and are allowable for at least the same reasons.

Further, none of Stokes, Oulid-Aissa, or Long teaches a method for generating a change sequence number. Stokes merely describes a change sequence number, and page 9 section 5.3.2.2 of Stokes only states that a change sequence number is used. Page 9 section 5.3.2.2 of Stokes does not teach how a change sequence number is initialized. Further, the Examiner asserts that page 7 section 5.3 of Stokes and page 9 section 5.3.2.2 of Stokes teach the step of retrieving a sequence number portion. However, neither section 5.3 of Stokes, nor section 5.3.2.2 of Stokes describe a sequence number, and further they do not describe how to retrieve a sequence number.

In view of the above, Stokes, Oulid-Aissa, and Long, whether considered separately or together, fail to show or suggest the present invention as recited in claims


10 and 18. Thus, claims 10 and 18 are patentable over Stokes, Oulid-Aissa, and Long. Dependent claims 11-17, which depend directly from claim 10, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 13220.008001).

Respectfully submitted,

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